

- 1 -- 36. A wall designed to resist lateral forces imposed on a building incorporating said wall, said building having an underlying structural component ^{for} supporting said wall, said wall comprising:
- 5 a. a bottom plate ^{for} resting on said underlying structural component of said building;
- b. a foundation anchor for connecting said bottom plate to said underlying structural component of said building;
- c. a plurality of vertically-disposed studs resting on said bottom plate;
- 10 d. nails for connecting said plurality of vertically-disposed studs to said bottom plate;
- e. a top plate resting on said vertically-disposed studs;
- f. nails for connecting said top plate to said vertically-disposed studs;
- 15 g. a shear-resisting assembly connected to said top plate and also ^{for connecting} ~~connected~~ to said underlying structural component and disposed ^{for being} between said top plate and said underlying structural component, said shear-resisting assembly including,
1. a planar shear-resisting element, said planar shear-resisting element having a proximal face and a distal face, a top edge, a bottom edge and first and second side edges, said
- 20 shear-resisting assembly also including,
2. a top strut connected to said proximal face near said top edge of said shear-resisting element, and disposed substantially parallel to said top plate of said wall,
3. a bottom strut connected to said proximal face near said
- 25 bottom edge of said shear-resisting element,
4. a first chord connected to said proximal face near said first side edge of said shear-resisting element,
5. a second chord connected to said proximal face near said second side edge of said shear-resisting element, and
- 30 6. nails for connecting said top strut, said bottom strut, said first chord and said second chord to said shear-resisting element,
- said top and bottom struts and said first and second chords forming a supporting frame for said shear-resisting element;

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- 1 h. top plate fasteners, having a threaded shank portion, for
connecting said shear-resisting assembly to said top plate of said wall;
and
i. one or more foundation anchors for connecting said shear-resisting
5 assembly to said underlying structural component of said building. --

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-- 37. A wall designed to resist lateral forces imposed on a building
incorporating said wall, said building having an underlying structural
component ^{for} supporting said wall, said wall comprising:

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^C 10 a. a bottom plate ^{for} resting on said underlying structural component of
said building;
b. means for connecting said bottom plate to said underlying structural
component of said building;
c. a plurality of vertically-disposed studs resting on said bottom plate;
15 d. means for connecting said plurality of vertically-disposed studs to
said bottom plate;
e. a top plate resting on said vertically-disposed studs;
f. means for connecting said top plate to said vertically-disposed
studs;
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^C g. a shear-resisting assembly connected to said top plate and also
^{for connecting} ~~connected~~ to said underlying structural component and ^{for being} ~~disposed~~
between said top plate and said underlying structural component, said
shear-resisting assembly including,

- 25 1. a planar shear-resisting element, said planar shear-resisting
element having a proximal face and a distal face, a top edge, a
bottom edge and first and second side edges, said
shear-resisting assembly also including,
2. a top strut connected to said proximal face near said top
edge of said shear-resisting element, and disposed substantially
30 parallel to said top plate of said wall,
3. a bottom strut connected to said proximal face near said
bottom edge of said shear-resisting element,
4. a first chord connected to said proximal face near said first
side edge of said shear-resisting element,
35 5. a second chord connected to said proximal face near said
second side edge of said shear-resisting element, and

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1 6. means for connecting said top strut, said bottom strut, said
first chord and said second chord to said shear-resisting
element,
said top and bottom struts and said first and second chords forming a
5 supporting frame for said shear-resisting element;
h. means for connecting said shear-resisting assembly to said top
plate of said wall; and
i. a foundation anchor for connecting said shear-resisting assembly to
10 said underlying structural component of said building, said foundation
anchor being designed to transmit lateral forces imposed on said
underlying structural component to said shear-resisting assembly, and
wherein said bottom strut is formed with an opening through which
said foundation anchor passes, and said opening in said bottom strut is
a notch in said bottom strut that allows said bottom strut to slide into
15 place. --

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-- 38. ³ The wall of claim ² 37, further comprising:
epoxy within said opening in said bottom strut to ensure close contact
between said foundation anchor and said bottom strut. --

20 -- 39. ⁴ A wall designed to resist lateral forces imposed on a building
incorporating said wall, said building having an underlying structural
component ^{for} supporting said wall, said wall comprising:
a. a bottom plate ^{for} resting on said underlying structural component of
25 said building;
b. means for connecting said bottom plate to said underlying
structural component of said building;
c. a plurality of vertically-disposed studs resting on said bottom plate;
d. means for connecting said plurality of vertically-disposed studs to
30 said bottom plate;
e. a top plate resting on said vertically-disposed studs;
f. means for connecting said top plate to said vertically-disposed
studs;
g. a shear-resisting assembly connected to said top plate and also
35 ^{for connecting} connected to said underlying structural component and ^{for being} disposed

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1 between said top plate and said underlying structural component, said shear-resisting assembly including,

- 5 1. a planar shear-resisting element, said planar shear-resisting element having a proximal face and a distal face, a top edge, a bottom edge and first and second side edges, said shear-resisting assembly also including,
2. a top strut connected to said proximal face near said top edge of said shear-resisting element, and disposed substantially parallel to said top plate of said wall,
- 10 3. a bottom strut connected to said proximal face near said bottom edge of said shear-resisting element,
4. a first chord connected to said proximal face near said first side edge of said shear-resisting element,
5. a second chord connected to said proximal face near said second side edge of said shear-resisting element, and
6. means for connecting said top strut, said bottom strut, said first chord and said second chord to said shear-resisting element,

said top and bottom struts and said first and second chords forming a supporting frame for said shear-resisting element;

h. means for connecting said shear-resisting assembly to said top plate of said wall;

i. means for connecting said shear-resisting assembly to said underlying structural component of said building;

15 j. first and second anchor bolts ^{for anchoring} that are anchored to said underlying structural component and are disposed near said first and second chords;

k. first and second holdowns that receive said first and second anchor bolts;

20 l. nuts that are fitted on said first and second anchor bolts and engage said first and second holdowns;

m. means for connecting said first and second holdowns to said first and second chords, and wherein;

25 n. said bottom strut is formed with anchor bolt openings through which said first and second anchor bolts pass, said anchor bolt openings in said bottom strut being notches in said bottom strut that

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1 allow said bottom strut to slide into place, and are oversized to
accommodate mis-installation of said first and second anchor bolts in
said underlying structural component. --

5 ~~--40~~⁵ The wall of claim ~~30~~⁴, wherein:

- a. said first and second holdowns are formed with slotted openings that are oriented in the same direction as, and are in general alignment with, said notches in said bottom strut, when said first and second holdowns are attached to said first and second chords, said slotted openings receiving said first and second anchor bolts; and
- b. said first and second holdowns are formed with portals to allow said shear-resisting assembly to be slid into place. --

15 ~~--41~~⁶ A wall designed to resist lateral forces imposed on a building incorporating said wall, said building having an underlying structural component supporting said wall, said wall comprising:

- a. a bottom plate resting on said underlying structural component of said building;
- b. means for connecting said bottom plate to said underlying structural component of said building;
- c. a plurality of vertically-disposed studs resting on said bottom plate;
- d. means for connecting said plurality of vertically-disposed studs to said bottom plate;
- e. a top plate resting on said vertically-disposed studs;
- f. means for connecting said top plate to said vertically-disposed studs;
- g. a shear-resisting assembly connected to said top plate and also connected to said underlying structural component and disposed between said top plate and said underlying structural component, said shear-resisting assembly including,

- 1. a planar shear-resisting element, said planar shear-resisting element having a proximal face and a distal face, a top edge, a bottom edge and first and second side edges, said shear-resisting assembly also including,

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- 1 2. a top strut connected to said proximal face near said top
edge of said shear-resisting element, and disposed substantially
parallel to said top plate of said wall,
3. a bottom strut connected to said proximal face near said
5 bottom edge of said shear-resisting element,
4. a first chord connected to said proximal face near said first
side edge of said shear-resisting element,
5. a second chord connected to said proximal face near said
second side edge of said shear-resisting element, and
- 10 6. means for connecting said top strut, said bottom strut, said
first chord and said second chord to said shear-resisting
element,

said top and bottom struts and said first and second chords forming a
supporting frame for said shear-resisting element;

- 15 h. means for connecting said shear-resisting assembly to said top
plate of said wall;
- i. means for connecting said shear-resisting assembly to said
underlying structural component of said building;
- 20 j. first and second anchor bolts ^{for anchoring} that are anchored to said underlying
structural component and are disposed near said first and second
chords;
- k. first and second holdowns that receive said first and second anchor
bolts;
- 25 l. nuts that are fitted on said first and second anchor bolts and engage
said first and second holdowns;
- m. holdown fasteners, having a threaded shank portion, for
connecting said first and second holdowns to said first and second
chords, and wherein;
- 30 n. said bottom strut is formed with anchor bolt openings through
which said first and second anchor bolts pass. --

35 -- 42. The wall of claim 41, wherein:
said threaded holdown fasteners are inserted only a selected distance
into said first and second chords without passing all the way through
said first and second chords. --

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- 1 -- 43. A wall designed to resist lateral forces imposed on a building incorporating said wall, said building having an underlying structural component supporting said wall, said wall comprising:
- 5 a. a bottom plate resting on said underlying structural component of said building;
- b. means for connecting said bottom plate to said underlying structural component of said building;
- c. a plurality of vertically-disposed studs resting on said bottom plate;
- 10 d. means for connecting said plurality of vertically-disposed studs to said bottom plate;
- e. a top plate resting on said vertically-disposed studs;
- f. means for connecting said top plate to said vertically-disposed studs;
- 15 g. a shear-resisting assembly connected to said top plate and also connected to said underlying structural component and disposed between said top plate and said underlying structural component, said shear-resisting assembly including,
- 20 1. a planar shear-resisting element, said planar shear-resisting element having a proximal face and a distal face, a top edge, a bottom edge and first and second side edges, said shear-resisting assembly also including,
- 25 2. a top strut connected to said proximal face near said top edge of said shear-resisting element, and disposed substantially parallel to said top plate of said wall,
3. a bottom strut connected to said proximal face near said bottom edge of said shear-resisting element,
- 30 4. a first chord connected to said proximal face near said first side edge of said shear-resisting element,
5. a second chord connected to said proximal face near said second side edge of said shear-resisting element, and
6. edge fasteners, having shank portions, for connecting said top strut, said bottom strut, said first chord and said second chord to said shear-resisting element,
- 35 said top and bottom struts and said first and second chords forming a supporting frame for said shear-resisting element;

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- 1 h. means for connecting said shear-resisting assembly to said top plate of said wall;
- i. means for connecting said shear-resisting assembly to said underlying structural component of said building; and
- 5 j. boundary edging members disposed on said shear-resisting element at said top and bottom edges and said first and second side edges that are pierced by said shank portions of said edge fasteners and thereby strengthen the connection made by said edge fasteners, and wherein said boundary edging members are u-shaped channels, having a pair of
- 10 legs joined by a central member that embrace said shear-resisting element, each of said edge fasteners passing through each of said legs of said u-shaped channels. --

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-- 44. A wall designed to resist lateral forces imposed on a building incorporating said wall, said building having an underlying structural component ^{for} supporting said wall, said wall comprising:

- a. a bottom plate resting on said underlying structural component of said building;
- b. means for connecting said bottom plate to said underlying structural component of said building;
- c. a plurality of vertically-disposed studs resting on said bottom plate;
- d. means for connecting said plurality of vertically-disposed studs to said bottom plate;
- e. a top plate resting on said vertically-disposed studs;
- 25 f. means for connecting said top plate to said vertically-disposed studs;
- g. a shear-resisting assembly connected to said top plate and also ^{for connecting} connected to said underlying structural component and disposed ^{for being} between said top plate and said underlying structural component, said shear-resisting assembly including,
- 30 1. a planar shear-resisting element, said planar shear-resisting element having a proximal face and a distal face, a top edge, a bottom edge and first and second side edges, said shear-resisting assembly also including,
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- 1 2. a top strut connected to said proximal face near said top edge of said shear-resisting element, and disposed substantially parallel to said top plate of said wall,
3. a bottom strut connected to said proximal face near said bottom edge of said shear-resisting element,
- 5 4. a first chord connected to said proximal face near said first side edge of said shear-resisting element,
5. a second chord connected to said proximal face near said second side edge of said shear-resisting element, each of said first and second chords of said shear-resisting assembly being formed from two elongated wood members, laminated together, and
- 10 6. means for connecting said top strut, said bottom strut, said first chord and said second chord to said shear-resisting element,
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said top and bottom struts and said first and second chords forming a supporting frame for said shear-resisting element;

h. means for connecting said shear-resisting assembly to said top plate of said wall; and

i. means for connecting said shear-resisting assembly to said underlying structural component of said building. --

-- 45. A wall designed to resist lateral forces imposed on a building incorporating said wall, said building having an underlying structural component supporting said wall, said wall comprising:

- 25 a. a bottom plate resting on said underlying structural component of said building;
- b. means for connecting said bottom plate to said underlying structural component of said building;
- 30 c. a plurality of vertically-disposed studs resting on said bottom plate;
- d. means for connecting said plurality of vertically-disposed studs to said bottom plate;
- e. a top plate resting on said vertically-disposed studs;
- 35 f. means for connecting said top plate to said vertically-disposed studs;

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g. a shear-resisting assembly connected to said top plate and also
connected to said underlying structural component and disposed
between said top plate and said underlying structural component, said
shear-resisting assembly including,

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1. a planar shear-resisting element, said planar shear-resisting
element having a proximal face and a distal face, a top edge, a
bottom edge and first and second side edges, said
shear-resisting element comprising a plurality of adjoining
structural panels disposed in a single plane, forming joints
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between said structural panels, said shear-resisting assembly
also including,
2. a top strut connected to said proximal face near said top
edge of said shear-resisting element, and disposed substantially
parallel to said top plate of said wall,
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3. a bottom strut connected to said proximal face near said
bottom edge of said shear-resisting element,
4. a first chord connected to said proximal face near said first
side edge of said shear-resisting element,
5. a second chord connected to said proximal face near said
second side edge of said shear-resisting element, and
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6. means for connecting said top strut, said bottom strut, said
first chord and said second chord to said shear-resisting
element,

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said top and bottom struts and said first and second chords forming a
supporting frame for said shear-resisting element;

h. means for connecting said shear-resisting assembly to said top
plate of said wall; and

i. means for connecting said shear-resisting assembly to said
underlying structural component of said building. --

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The wall of claim 46, wherein said shear-resisting assembly further
comprises:

a. intermediate studs disposed between said top and bottom struts of
said shear-resisting element;

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b. means for connecting said intermediate studs to said top and
bottom struts;

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1 c. means for connecting said intermediate studs to said structural panels; and

wherein selected intermediate studs are disposed at said joints of said structural panels, serving to connect said structural panels together. --

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~~47~~. A wall designed to resist lateral forces imposed on a building incorporating said wall, said building having an underlying structural component supporting said wall, said wall comprising:

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a. a bottom plate resting on said underlying structural component of said building;

b. means for connecting said bottom plate to said underlying structural component of said building;

c. a plurality of vertically-disposed studs resting on said bottom plate;

d. means for connecting said plurality of vertically-disposed studs to said bottom plate;

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e. a top plate resting on said vertically-disposed studs;

f. means for connecting said top plate to said vertically-disposed studs;

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g. a shear-resisting assembly connected to said top plate and also connected to said underlying structural component and disposed between said top plate and said underlying structural component, said shear-resisting assembly including,

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1. a planar shear-resisting element, said planar shear-resisting element having a proximal face and a distal face, a top edge, a bottom edge and first and second side edges, said shear-resisting assembly also including,

2. a top strut connected to said proximal face near said top edge of said shear-resisting element, and disposed substantially parallel to said top plate of said wall,

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3. a bottom strut connected to said proximal face near said bottom edge of said shear-resisting element,

4. a first chord connected to said proximal face near said first side edge of said shear-resisting element,

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5. a second chord connected to said proximal face near said second side edge of said shear-resisting element, and

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1 6. edge fasteners, having shank portions, for connecting said
top strut, said bottom strut, said first chord and said second
chord to said shear-resisting element,
said top and bottom struts and said first and second chords forming a
5 supporting frame for said shear-resisting element;
h. means for connecting said shear-resisting assembly to said top
plate of said wall;
i. means for connecting said shear-resisting assembly to said
underlying structural component of said building;
10 j. boundary edging members disposed on said shear-resisting element
at said top and bottom edges and said first and second side edges that
are pierced by said shank portions of said edge fasteners and thereby
strengthen the connection made by said edge fasteners; and wherein
k. said means for connecting said shear-resisting assembly to said
15 underlying structural component is a foundation anchor ^{for anchoring} anchored to
said underlying structural component, said foundation anchor being
designed to transmit lateral forces imposed on said underlying
structural component to said shear resisting assembly, and said
bottom strut is formed with an opening through which said foundation
20 anchor passes, and said opening in said bottom strut is oversized to
accommodate mis-installation of said foundation anchor in said
underlying structural component, and epoxy is placed within said
opening in said bottom strut to ensure close contact between said
foundation anchor and said bottom strut.

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REMARKS*Introduction*

By the above amendments, Applicants have canceled all the pending
claims from the application and added new claims 36 through 47.

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Drawings

The examiner objected to the drawings under 37 CFR §1.83(a). The
examiner required Applicants to either provide a drawing showing a wall with
a plurality of adjoining structural panels or cancel those features from claims

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